



Naval Medical Research and Development

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News Releases

R&D Chronicles: Dr. Rivers and the Origin of NAMRU-2 Part II of III

Released: 10/16/2017

By. Andre Sobocinski, Historian, Bureau of Medicine and Surgery



Photo 1, (bottom, right) Members of NAMRU-2 "Mobile Detachment" in Micronesia, ca. 1945.

Even before NAMRU-2 was fully operational Rivers began sending similar detachments into the field across the Pacific Theater. BUMED Archives.

Photo 2, (top, right) View of NAMRU-2 Headquarters on Guam. The unit would be located on hospital point adjoining two naval fleet hospitals. BUMED Archives.

Photo 3, (left) Cmdr. Richard Shope, MC, USNR, was one of NAMRU-2's preeminent plankowners.

News Releases

NMRC EDGE Bioinformatics Software Wins Federal Lab Consortium Mid-Continent 2017 Notable Technology Development Award, also Selected as R&D 100 Finalist

NAMRU-SA Researcher Serves as Official USA Archery Judge at Valor Games Southwest

R&D Chronicles: Dr. Rivers and the Origin of NAMRU-2 Part II of III

R&D Chronicles: The Story of Dr. Rivers and the Origin of NAMRU-2 Part I

Improving Biopreparedness in West Africa

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NMRC Presents Research on Advanced Modeling to Predict Pneumonia in Combat Trauma Patients

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NMRC Researchers Present Research on Aeromedical Evacuation of Combat Casualties at MHSRS

Tackling Common Problems: NASA Scientists and NSMRL Researchers

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“[The] U.S. Naval Medical Research Unit No.2 will shortly sail for its designated bases, and I am solicitous that the enterprise, it being a trail-blazer and possibly the forerunner of other similar units, have every opportunity to demonstrate its usefulness.”

~Vice Adm. Ross McIntire, Surgeon General of the Navy to Capt. Thomas Anderson, MC, USN, Staff Surgeon, CINCPAC, Oct. 30, 1944

By the end of January 1944, Dr. Tom Rivers stood at the helm of an organization that had yet to be realized. As the Officer in Charge of U.S. Naval Medical Research Unit No.2 (NAMRU-2), Rivers would have the sizeable task of adapting concept into reality—i.e., recruiting personnel, acquiring the requisite equipment and supplies, and standing up the command.

To address his staffing needs, Rivers turned to his colleagues at the Rockefeller Naval Hospital Research Unit. NAMRU-2’s staff would not only be comprised of a who’s who of Rockefeller’s finest, but some of most preeminent physicians and scientists in the world—each acting in the capacity as naval reservists.

Rivers tapped Dr. Francis Schwentker (1904-1954) as his second-in-command. Schwentker, one of the foremost clinical investigators in the nation, had worked with Rivers at the Rockefeller Institute since the 1930s. He would oversee the planning and ensure the NAMRU-2’s construction remained on schedule. Others on the roster would be no less distinguished...

- Richard Shope (1901-1966), a virologist whose accomplishments included discovering the *Shope Papilloma* virus, a condition that caused the formation of horny protrusions in cottontail rabbits (and possibly serving as the root of the jack-a-lope legend). His work on Rift Valley Fever and equine encephalitis would later prove seminal to the Navy.
- Norman Stoll (1893-1977) was a parasitologist and one of the nation’s foremost experts on hookworm.
- Marion Sulzberger (1895-1983) was a dermatologist and leading expert on dermatologic immunology and contact allergies (e.g., poison ivy, etc).
- Harry Zimmerman (1901-1995) was a neuropathologist and pioneer in the study of diseases of the nervous system. He would later co-found Albert Einstein College of Medicine.
- Horace Hodes (1907-1989) was an infectious disease researcher known for his work on Japanese encephalitis, gastroenteritis and identifying the main function of Vitamin D (i.e., absorption of calcium through the intestines).
- Lewis Thomas (1913-1993) was a physician, poet and immunology researcher who later authored the popular science books *The Lives of a Cell: Notes of a Biology Watcher* (1974) and *The Youngest Science: Notes of a Medicine-Watcher* (1983).
- Kenneth Knight (1915-2001) was the first entomologist to serve in a combat zone and one of the pioneers of the Navy’s malaria control program.

[R&D Chronicles: Dr. Krueger and the Story of the First NAMRU](#)

[Navy Undersea Medical Officer and Anesthesiologist Slated for Research at Naval Medical Research Center](#)

[Surface Warfare Officer Selected NAMRU-Dayton for Graduate Internship](#)

[Meet NAMRU-SA’s Research Dentists – Focused on Innovation to Support Warfighter Readiness](#)

[Keeping Cool with Science](#)

Cmdr. James Sapero, a medical intelligence officer then serving in BUMED’s Research Division in Washington, D.C., would help ensure NAMRU-2 was supplied with some of the most skilled laboratory technicians and general duty pharmacist’s mates in the Navy. Other specialists—representing a multitude of disciplines from zoology to infectious disease—would join the staff over the next year.

In April 1944, months before NAMRU-2 became operational, Rivers began deploying, as he termed them, “mobile detachments” into the field to investigate outbreaks or threats of disease across the Pacific Theater.

On Peleliu Island, Lt. Cmdr. Herbert Hurlbut, and Lts. John Maple and Bernard Travis would study methods of insect control and introduce the dispersal of aerial spraying of Dichlorodiphenyltrichloroethane (DDT) in the Pacific. Later in the war, Maple would become NAMRU-2’s only casualty when his plane crashed during a dispersal run on Okinawa.

On Bougainville Island, Lt (j.g.)’s David Johnson and George Wharton studied mite and mite-bearing animals and their relationship to scrub typhus. And on New Guinea, entomologists Lts. Kenneth Knight and Lloyd Rozeboom investigated the taxonomic problems related to malaria.

In November 1944, a NAMRU-2 contingent lead by Cmdr. Richard Shope arrived on Guam to make preparations for the unit’s main party. After scouting the island and meeting with naval officials, Shope would help select NAMRU-2’s base of operations—a 25 acre plot of land adjoining Naval Fleet Hospital 103 to the North and Naval Fleet Hospital 111 to the East. Over the next several months Naval Construction Battalions (CBs) would work on clearing the land and construct 62 buildings that would serve as laboratories, special wards, as well as administrative functions.

Shope’s visit would also lead to NAMRU-2’s investigation into Guam’s hookworm problem. While visiting the Agana Hospital, Shope discovered that hookworm was rampant among the youngest patients and would collaborate with Norman Stoll on pinpointing the source of infection.

As Rivers later related: “. . . we learned that before we liberated Guam, the Japanese had herded the native population out of the towns of Agana and Agat into tent refugee camps. It was rainy, [and] sanitary conditions were very primitive and poor . . . when mothers had babies in these badly crowded and wet tents they kept them on planks held by two wooden horses. The quilts and other bedding used to cover these planks were always moist and in a very short time, without anyone being aware of it, became ideal hatching places for hookworm larvae.”

(to be continued)

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